STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

North Shore Gas Company	)	
	)	
The Peoples Gas Light	)	
and Coke Company	)	Docket No. 10-0565
	)	and 10-0566 (cons.)
Petition Pursuant to Rider EEP	)	
of Schedule of Rates for Gas	)	
Service to Initiate a Proceeding to	)	
Determine the Accuracy of the	)	
Rider EEP Reconciliation Statement	)	

REBUTTAL TESTIMONY OF

JOHN PLUNKETT

ON BEHALF OF

THE PEOPLES GAS LIGHT AND COKE COMPANY AND NORTH SHORE GAS COMPANY

I. Witness Qualifications

Q: Please state your name, job title and business address.

A: I am John J. Plunkett. I am a partner in and president of Green Energy Economics Group, Inc., an energy consultancy I co-founded in 2005. My office address is 1002 Jerusalem Road, Bristol Vermont 05443.

Q: Please summarize your qualifications.

A: I have worked for over thirty years in energy utility planning, concentrating on energy efficiency as a resource and business strategy for energy service providers. Throughout my career I have played key advisory and negotiating roles on all aspects of electric and gas utility demand side management ("DSM"), including residential, industrial, and commercial program design; implementation management and oversight; performance incentive design; and monitoring, verification, and evaluation. I have led, prepared, or contributed to numerous analyses and reports on the economically achievable potential for efficiency and renewable resources. Over the past two decades, I have been involved in the review or preparation of many gas and electricity DSM investment plans. I have worked on these issues throughout North America and in China on behalf of energy service providers, citizen and environmental groups, state consumer advocates, utility regulators, and government agencies at the local, state, provincial, and national levels.

I earned my B.A. in Economics with Distinction from Swarthmore College, where I graduated Phi Beta Kappa and was awarded the Adams Prize in Economics. My resume is attached as NS-PGL Ex. 5.1.

Q: Have you testified previously in utility regulatory proceedings?

A: Yes. I have testified as an expert witness over two dozen times before regulators in a dozen states and three Canadian provinces.

Q: Have you previously testified before the Illinois Commerce Commission ("Commission")?

A: Yes, I have.

II. Purpose of Testimony

Q: What is the purpose of your testimony?

A: My testimony, on behalf of North Shore Gas Company and The Peoples Gas Light and Coke Company (the "Utilities"), responds to the direct testimony of Commission Staff witness Dr. David Brightwell. There are several misinterpretations in Dr. Brightwell's testimony that require clarification, including whether a disallowance is appropriate at all, the calculation of any disallowance, and the assumptions in the modeling and cost-effectiveness analysis for wall insulation.

Q: Summarize your testimony.

A: Dr. Brightwell recommends a disallowance of 44.6% of the expenses related to wall insulation rebates offered through the Chicagoland Natural Gas Savings Program ("CNGSP"). His recommendation relies, in part, on the disallowance of the portion of Program Year ("PY") 1 wall insulation costs that were not cost-effective according to the Commission's PY 1 Order in Docket Nos. 09-0436/0437 (cons.)[1].

[1] Amendatory Order issued April 12, 2011,

This rebuttal testimony covers three main points. First, the basis of disallowance in PY 1 for a portion of the wall insulation cost does not apply in PY 2, and so there should not be any disallowance of costs for wall insulation applied to PY 2 based on the disallowance for a portion of wall insulation costs in PY 1. Second, a disallowance based on cost-effectiveness is not appropriate based on the Commission's Order in PY 1. Third, this testimony provides corrections to both Dr. Brightwell's and the program team's modeling assumptions that result in wall insulation with a Total Resource Cost ("TRC") test of 1.35.

III. Basis of PY 1 Disallowance and Applicability to PY 2

Q: What was the basis for the Commission's decision to disallow a portion of the costs for wall insulation for Program Year 1?

A: The Commission determined in its PY1 reconciliation order that including wall insulation was imprudent because of the apparent contradictions between the forecasted cost of wall insulation for cost-effectiveness analysis and actual market behavior and program outreach. Specifically, the original forecasted costs entered into the calculator, at $0.35 per square foot, were based on the assumption that customers would install their own insulation due to the declining economy. The Commission found that this cost assumption was not prudent, and so disallowed a portion of the wall insulation cost.

Q: Were the cost inputs to the calculator updated for PY 2 in a manner that was prudent and reasonable?

A: Yes. The costs entered into the calculator for PY 2 were taken from actual program costs provided on customer invoices on rebate applications for PY 1.

This included the real-world installed costs from actual invoices that included materials and labor. Customers provided all invoices and receipts documenting all costs eligible for the incentive, and therefore, the updated cost, of $1.22 per square foot, is a true and prudent representation of the average Chicagoland area cost of installing wall insulation.

Using the actual program costs by definition meets the Commission's standard of including "typical labor costs in wall insulation TRC calculations" (Order, p. 19). Using the average of actual costs found on customer applications must be construed to be "typical".

Q: Should there be a disallowance for including wall insulation in PY 2?

A: No. The assumptions and inputs to the calculations were updated for PY 2 to reflect actual costs and installation practices for wall insulation in the program. Given the basis in real-world program results, the assumptions for the PY 2 cost-effectiveness calculations could not be found to be imprudent. Therefore, there is no basis for disallowance for wall insulation in PY 2.

IV. Cost-Effectiveness as Basis for Disallowance

Q: With the updated cost inputs, was wall insulation found to be cost-effective in PY 2?

A: No, assuming a cost-effectiveness standard defined as a TRC of 1.0 or higher. However, as described below, other model assumptions yield a TRC in excess of 1.0. After updating the TRC calculations to use actual costs of installing wall insulation in the Utilities' service territories for CNGSP projects completed in PY 1, the TRC was reduced to 0.70. The installation costs were increased from the

assumed $0.35 per square foot for self-installation to the actual program average of $1.22 per square foot for the actual average installed cost of wall insulation.

Q: Why was it prudent to include wall insulation if it was not cost-effective?

A: The CNGSP Board found that wall insulation remained an important measure to achieve energy savings and achieve other portfolio level goals given the characteristics of regional housing stock and climate of the Utilities' service territories. The Commission did not disagree. Specifically, in the PY 1 Order, the Commission ruled that "the Commission's imprudence finding here has nothing to do with the efficacy of wall insulation as an energy efficiency measure." Order, p. 19. Many Chicago area homes do not have wall insulation, and the energy savings potential is significant. The CNGSP Governance Board found that wall insulation helped to meet the CNGSP overall energy savings goals and contributes to the health and welfare of customers who install it.

The Commission in fact stated that "the Utilities' error was not in selecting an energy efficiency measure with a sub-1.0 TRC result. As we stated above, it was permissible for the Governance Board to evaluate cost-effectiveness at the portfolio level, and it is implicit in that holding that measures with a TRC below 1.0 might be included for sound reasons." Order, pp.19-20.

Q. Dr. Brightwell's testimony bases a disallowance on the difference between 1.0 TRC and actual measure-level TRC. Is this an appropriate calculation following the PY 1 Order?

A: No. The disallowance was the differential between a 1.0 TRC and a re-calculated TRC of 0.70 based on assumptions at the start of PY 1 that were determined by

the Commission to be imprudent. When the assumptions were updated in a manner that can only be found to be prudent, there is no basis for disallowance, even if the TRC of the individual measure is below 1.0.

V. Cost-Effectiveness Analysis Corrections and Clarifications

Q: Was the TRC of 0.70 provided by the CNGSP Team an accurate representation of the cost-effectiveness of wall insulation?

A: No. In fact, Dr. Brightwell's testimony led the program design team to re-examine all assumptions in the original wall insulation modeling, as well as the energy savings calculations provided in response to Staff Data Requests POL-4.01-4.05. This re-examination uncovered an error in the original CNT[2] analysis. Estimated energy savings from building simulation modeling was 276.3 therms, which assumed 1,782 square feet of first-floor sidewall insulation. The mistake occurred when CNT accidentally included basement wall area in the denominator when it calculated heating gas savings (and cooling load increase) per square foot. The total area mistakenly included was 3,366 square feet. Using the correct value for wall insulation of 1,782 effectively doubled energy impacts. The original, erroneous result used in the initial cost-effectiveness calculations and in the Data Request responses was 0.08 therms/sf (= 276.3 therms / 3,366 sf), which in turn produced the TRC benefit/cost ratio of 0.70. The correct result is 0.155 therms/sf (= 276.3 therms / 1,782 sf), which yields a TRC benefit-cost ratio of 1.35.

Further, the TRC calculations provided in response to the same Data Requests changed several key inputs, including the cost of wall insulation (using

[2] CNT Energy, a division of the Center for Neighborhood Technology ("CNT").

an earlier assumed cost of contractor-installed insulation only, rather than actual program results data), and provided for a longer measure life of 40 years rather than the assumed 20 year life in the original cost-effectiveness calculation. The team also realized that the updated calculations were based on the 2010 version of the cost-effectiveness calculator, which would not have been available in 2008-2009 to assess program and measure cost-effectiveness.

Q: How did the team modify the cost-effectiveness analysis to correct for these factors?

A: The inputs and assumptions can be summarized as follows: The original home modeled by CNT, was used, but no costs were included for insulating basement walls since the model did not include basement insulation. The cost of wall insulation was calculated at $1.22 per square foot, which reflects actual program costs for wall insulation. Wall insulation was assumed to have a 20 year life. The model assumed 1,782 square feet of insulation, instead of 3,366 square feet, as the larger square footage improperly includes basement walls. The 2008 cost-effectiveness calculator was used, as this was the appropriate tool for projecting TRC for the Program Year starting in mid-2009.

Q: With the updated modeling assumptions and correct cost-effectiveness inputs, was wall insulation cost-effective for PY 2?

A: Yes. Using the reasonable and prudent inputs described above in the cost-effectiveness calculator, wall insulation was in fact cost-effective as an individual measure for PY 2. Even assuming erroneously as Dr. Brightwell does that cost-

effectiveness alone is a valid basis for disallowing program costs, there would be no case for any disallowance.

Q: Dr. Brightwell requested additional modeling and cost-effectiveness analysis based on a range of assumed home dimensions. Were the assumptions he provided as inputs to the revised TRC calculations appropriate?

A: No. The dimensions Dr. Brightwell provided were hypothetical building dimensions. While CNT developed models using these dimensions, CNT was not supplied with the reasoning behind the specific dimensions, so no evaluation as to their appropriateness was made.

Q: Are the modeling assumptions used by Dr. Brightwell that resulted in a TRC of 0.41-0.51 more prudent or more accurate than the program-provided inputs that previously resulted in a TRC of 0.70?

A: No. The inputs that resulted in the TRC of 0.70 were based on the following assumptions: Actual installed costs of $1.22/square foot (based on program data), 20-year measure life, and the same characteristics of a typical Chicago area home as in the original model.

Dr. Brightwell appears to have interpreted the program average of 1,147 square feet of wall insulation installed as an indication about the size or dimensions of the home. His interpretation that the 1,147 square feet represents the total wall space in the home resulted in the scenarios that Dr. Brightwell asked the Utilities to model in his data requests. These are no more prudent or accurate than the program-provided inputs that previously resulted in a TRC of 0.70. They are just a hypothetical set of modeling assumptions.

Q: Does this complete your rebuttal testimony?

A: Yes, it does.